

Docket No. 65370 (71526)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Yoji Hori et al.

Application No.: 10/581,537

Confirmation No.:

Filed: June 1, 2006

Art Unit: Not Yet Assigned

For: NOVEL MULTICOMPONENT OXIDATION  
CATALYST AND PROCESS FOR  
PRODUCING EPOXY COMPOUND  
THEREWITH

Examiner: Not Yet Assigned

Mail Stop: PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

TRANSMITTAL LETTER

Attached please find the following documents relating to PCT/JP2004/017380, from which the above-referenced application claims priority:

**CERTIFICATION UNDER 37 C.F.R. 1.10\***  
(Express Mail label number is **mandatory**.)  
(Express Mail certification is optional.)

I hereby certify that this Completion of Filing Requirements and the papers indicated as being transmitted therewith is being deposited with the United States Postal Service on this date **September 22, 2006**, in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number **EV 894 052 712 US**, addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Mail Stop PCT.

Elisabeth Dunkle

(type or print name of person mailing paper)

*Elisabeth Dunkle*

Signature of person mailing paper

**WARNING:** Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

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Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Transmittal of Documents--page 1 of 2)

Document(s): Notification of Transmittal of Copies of Translation of the International Preliminary Report on Patentability; International Preliminary Report on Patentability; and Written Opinion of the International Searching Authority

Form Number(s): Form PCT/IB/338; Form PCT/IB/373; and Form PCT/ISA/237

*WARNING: "When a document that is required by statute to be certified must be filed, a copy, including a photocopy or facsimile transmission of the certification is not acceptable." 37 C.F.R. section 1.4(f) (emphasis added).*


September 22, 2006

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\_\_\_\_\_  
**SIGNATURE OF PRACTITIONER**

Christine C. O'Day  
*(type or print name of practitioner)*  
EDWARDS ANGELL PALMER & DODGE LLP  
P. O. Box 55874, Boston, MA 02205  
P.O. Address

*NOTE: "The claim to priority need be in no special form and may be made by the attorney or agent, if the foreign application is referred to in the oath or declaration, as required by section 1.63." 37 C.F.R. section 1.55(a).*

**RECEIVED**

06. 8. 14

**SAEKI & PARTNERS PCT**

JA620030

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

**PATENT COOPERATION TREATY**

PCT/JP2004/017380

From the INTERNATIONAL BUREAU

To:

SAEKI, Norio  
4th Floor  
Aminosan Kaikan Building  
15-8, Nihonbashi 3-chome  
Chuo-ku, Tokyo 103-0027  
JAPON

Date of mailing (day/month/year)

03 August 2006 (03.08.2006)

Applicant's or agent's file reference

JA620030

**IMPORTANT NOTIFICATION**

International application No.

PCT/JP2004/017380

International filing date (day/month/year)

24 November 2004 (24.11.2004)

Applicant

TAKASAGO INTERNATIONAL CORPORATION et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

**Masashi Honda**

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

|  |  |  |
|--|--|--|
| Applicant's or agent's file reference<br>JA620030  | <b>FOR FURTHER ACTION</b>  | See item 4 below   |
| International application No.<br>PCT/JP2004/017380   | International filing date ( <i>day/month/year</i> )<br>24 November 2004 (24.11.2004) | Priority date ( <i>day/month/year</i> )<br>15 December 2003 (15.12.2003) |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |  |  |
| Applicant<br>TAKASAGO INTERNATIONAL CORPORATION  |  |  |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

|   |   |
|---|---|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Date of issuance of this report<br>24 July 2006 (24.07.2006)  |
| Facsimile No. +41 22 338 82 70  | Authorized officer<br><br><div style="text-align: center; font-weight: bold; font-size: 1.2em;">Masashi Honda</div> e-mail: pt08@wipo.int |

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**JA620030**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2004/017380**

International filing date (day/month/year)

**24.11.2004**

Priority date (day/month/year)

**15.12.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**TAKASAGO INTERNATIONAL CORPORATION**

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/017380

Box No. I

Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/017380

|   |   |       |     |
|---|---|-------|-----|
| <b>Box No. V</b>  | <b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b> |       |     |
| <b>1. Statement</b>   |   |       |     |
| Novelty (N)   | Claims  | _____ | YES |
|   | Claims  | 1-5   | NO  |
| Inventive step (IS)   | Claims  | _____ | YES |
|   | Claims  | 1-5   | NO  |
| Industrial applicability (IA)   | Claims  | 1-5   | YES |
|   | Claims  | _____ | NO  |
| <b>2. Citations and explanations:</b>   |   |       |     |
| <p>Document 1: JP, 2003-238544, A (Sumitomo Chemical Co., Ltd.), 27 August, 2003 (27.08.03), claims, mode of the invention, examples</p> <p>Document 2: JP, 2003-231680, A (Sumitomo Chemical Co., Ltd.), 19 August, 2003 (19.08.03), claims, mode of the invention, examples</p> <p>Claims 1-5:</p> <p>The subject matters of claims 1-5 do not appear to be novel, to involve an inventive step in view of document 1 or 2 cited in the ISR.</p> <p>The document 1 describes the production of an epoxy compound through hydrogen peroxide oxidation of an olefin in the presence of the catalyst comprising a tungsten compound, a quaternary ammonium hydrogen sulfate salt, and phosphoric acids.</p> <p>The document 2 describes the production of an epoxy compound through hydrogen peroxide oxidation of an olefin in the presence of the catalyst comprising a tungsten compound, a quaternary ammonium hydrogen sulfate salt, and boric acids.</p> |   |       |     |